



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/542,316	07/13/2005	Hiromasa Tanobe	5259-054/NP	1761
27572	7590	07/07/2006	EXAMINER	
HARNES, DICKEY & PIERCE, P.L.C.			SINGH, DALZID E	
P.O. BOX 828			ART UNIT	
BLOOMFIELD HILLS, MI 48303			PAPER NUMBER	
			2613	

DATE MAILED: 07/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/542,316

Applicant(s)

TANOBE ET AL.

Examiner

Dalzid Singh

Art Unit

2613

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 8-27 is/are rejected.
- 7) ☒ Claim(s) 6 and 7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 July 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 8-25 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim should refer to other claims in the alternative only; and/or, cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims 8-25 have not been further treated on the merits.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-5, 26 and 27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 26 and 27 recites, "...a routing function that outputs to predetermined optical output ports in accordance with a wavelength of optical signals inputted to respective optical input ports,..." It is unclear what is meant by *in accordance with a wavelength of optical signals*. Is the particular *wavelength* of optical signal containing specific instruction for the routing function? Or is the routing function simply routes wavelength of optical signals from input ports to output ports?

Claim 1 recites, "wherein said network-node equipments comprise a device of wavelength switching that switches the wavelength of said optical signals in order to

dynamically change a logical network topology..." It is unclear if the change in logical network topology is a result of reconfiguration of the AWG or is it as a result of reconfiguration of switching device within the node itself. It appears that network topology is changed as a result of AWG reconfiguration.

Claim 3 recites, "...transferring the network-node equipments belonging to a predetermined logical network topology, to another logical network topology". It is unclear what is meant by *predetermined* and *another* logical network topology.

Claim 26, recites, "...causes the switching of the wavelength..." It is unclear what causes the switching of the wavelength.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

5. Claims 1-7 are rejected under 35 U.S.C. 102(a) as being anticipated by Tanobe et al in the article "Demonstration of Logical-topology Reconfiguration in Full-mesh WDM Networks (AWG-STAR) Based on Wavelength Routing Technology" (hereinafter "Tanobe et al").

Regarding claim 1 (as far as understood in view of the 112 2nd paragraph), Tanobe et al disclose a fiber optic communication system comprising:

an arrayed waveguide grating (AWG) that has N optical input ports (where N is an integer greater than or equal to 2) and N optical output ports, and that has a routing function that outputs to predetermined optical output ports in accordance with a wavelength of optical signals inputted to respective optical input ports, and M (where M is an integer no smaller than 2, nor greater than an integer N) network-node equipments connected via optical transmission paths so as to form a geometrically star-shaped physical star topology having the AWG in the center,

wherein said network-node equipments comprise a device of wavelength switching that switches the wavelength of said optical signals in order to dynamically change a logical network topology that indicates a geometrical form of routes of the optical signals used for transmitting/receiving data (hereunder referred to as optical signals) between network-node equipment (see Figs. 1 and 2; page 1, col. 2, 1st paragraph; page 2, col. 1, 2nd paragraphs).

Regarding claim 2, wherein said network-node equipments belong to at least one or more logical network topologies, and configure two or more mutually independent logical network topologies (see Fig. 2).

Regarding claim 3 (as far as understood in view of the 112 2nd paragraph), wherein said wavelength switching device switches wavelengths of optical signals when connecting or transferring the network-node equipments belonging to a predetermined logical network topology, to another logical network topology (shown in Fig. 2, Tanobe et al shows different topologies).

Regarding claim 4, wherein a logical network topology is configured with two or more network-node equipments, and said wavelength switching device switches wavelengths of optical signals so that at a predetermined time, all of said two or more network-node equipments configure a new logical network topology that is different from said logical network topology (shown in Fig. 2, Tanobe et al shows different topologies).

Regarding claim 5, wherein said logical network topology configures at least one kind of either: a ring-shaped logical network topology having geometrically a ring shape, a star-shaped logical network topology, and a mesh-shaped logical network topology having a mesh shape, or configures a logical network topology that is a combination of these (see Fig. 2).

Allowable Subject Matter

6. Claims 26 and 27 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

7. Claims 6 and 7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Acampora et al (US Patent No. 5,530,575) is cited to show system and method for employing a recursive mesh network with extraplanar links.

Ramaswami et al (US Patent No. 5,781,537) is cited to show setting up, taking down and maintaining connections in communication networks.

Blair et al (US Patent No. 6,414,767) is cited to show meshed optical network.

Suzuki et al (US Patent No. 6,643,463) is cited to show optical WDM transmission network.

Liu (US Pub. No. 2002/0197007) is cited to show flexible optical network architecture and optical add/drop multiplexer/demultiplexer therefor.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dalzid Singh whose telephone number is (571) 272-3029. The examiner can normally be reached on Mon-Fri 9am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DS
June 27, 2006

David Singh